

Summary of IS 4072 :1975 - Specification for steel for spring washers

A spring washer is a type of washer used in bolted assemblies to prevent the loosening of nuts and bolts due to vibration or dynamic loads. It provides a locking mechanism by exerting a continuous force that maintains tension in the assembly. When the bolt or nut is tightened, the spring washer compresses and applies pressure on the fastener, reducing the chances of the assembly coming loose.

Steel used for spring washers must have certain characteristics to handle the stress and flexibility required to prevent loosening in assemblies. Spring washer steel should be able to withstand repeated loading without deforming permanently, which is why medium-carbon steel or alloy steel is typically used.

IS 4072:1975 standard covers the requirements for steel in the form of ingots, billets, plate, sheet, wire or rod intended to be used in the manufacture of spring washers.

The standard specifies the chemical composition of four grades, 55C6, 65C6, 70C6 and 80C6, of medium carbon steel, four grades, 38Si7, 50Si7, 55Si7 and 60Si7, of carbon-silicon steels and one grade, 50 CrV4, of carbon-chromium-vanadium steel, used in spring washers .

In addition the standard also specifies the method of manufacture, rolling tolerance and delivery conditions for the steel